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Marketing Research Report No. 333

MILK CONSUMPTION IN NONPROFIT SUMMER CAMPS

U.S. DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service
Marketing Research Division

PREFACE

This study of factors affecting milk consumption in summer camps is one in a series of reports evaluating selected aspects of public programs. The research on which it is based is part of a broad program designed to expand the market for farm products. Specific objectives were to obtain information upon which educational programs might be developed to encourage increased consumption of milk in nonprofit summer camps and to provide a better basis for milk producers, processors, and distributors to appraise the potential market for whole milk in this outlet.

The study was conducted in July and August 1958 in a random sample of 109 nonprofit resident summer camps participating in the Special Milk Program. The sample was representative of all such camps in the States of Maine, Massachusetts, and New York.

Appreciation is expressed to the State and local officials who cooperated by making available the data upon which this report is based. Acknowledgment is made to the enumerators who assisted in the collection of data for the study.

This study was conducted under the direction of William S. Hoofnagle, Market Development Branch, Marketing Research Division, Agricultural Marketing Service. Officials of the Food Distribution Division, AMS, assisted in planning the study, particularly those in the Program Analysis and Development Branch.

June 1959

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MILK CONSUMPTION IN NONPROFIT SUMMER CAMPS

By

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SUMMARY

In a survey of 109 nonprofit summer camps in 3 Northeastern States, it was found that the number of times milk was served each day, the milk purchasing practices followed by camp directors, the number and kinds of competing beverages available, and methods of serving have an appreciable effect on the level of milk consumption.

Camp directors are faced with the problem of the number of times milk should be made available to maximize consumption and the number of nonmilk beverage items that should be offered. Results of the study indicated that each additional serving of milk, up to 4 times daily, brought about an increase in per capita consumption of 0.9 half-pint, assuming no change in service of other beverages. Evidence suggests that, on the average, an individual's demand for milk in nonprofit summer camps is maximized with 4 servings; however, additional servings might result in increasing consumption at a decreasing rate. Each additional nonmilk beverage offered campers was directly associated with a drop of almost 0.2 half-pint in per capita milk consumption, assuming a constant number of daily milk servings.

The price paid by camps for fluid whole milk tended to be closely associated with the extent to which it was made available and, in turn, the level of per capita consumption. An inverse relationship prevailed between prices paid for milk by camps and the number of daily servings. Camps serving milk 2 or less times daily paid almost 0.4 of a cent more per half-pint of milk (the usual serving unit) than camps providing 4 daily servings. Camps paying in excess of 6 cents a half-pint had a daily per capita milk consumption rate of 3.3 half-pints compared with 3.6 half-pints for those paying under 6 cents.

Purchasing practices of camps in terms of size of unit in which milk was acquired directly influenced prices paid. Camps buying milk in half-pint cartons paid an average of 6.8 cents a half-pint compared with 4.8 cents per half-pint paid by those buying milk in 10-gallon containers. Camps purchasing all or a part of their supply in half-pint cartons had an average daily per capita milk consumption rate of 3.1 half-pints compared with a rate of 3.7 half-pints in all other camps. The average prices cited reflect actual payments to distributors; a reimbursement of 2 cents per half-pint was made to all camps participating in the Special Milk Program and not charging separately for milk.

Not only the availability but the kind of beverage offered affected the level of per capita consumption of milk by persons in nonprofit summer camps. Beverages such as fruit ade and cocoa made from skim milk or water acted as direct substitutes for whole milk, whereas fruit juices and soft drinks appeared to be complementary beverages. Where fruit ade was served, milk consumption was 0.8 half-pint below the rate in all other camps not making the item available. Conversely, fruit juices, usually served at breakfast along with milk, had no adverse effect on the level of milk consumption. Camps in which only milk and fruit juices were served had an average daily per capita consumption rate of 4.2 half-pints of milk, just 0.2 half-pint less than in those camps serving only milk.

Serving practices at mealtime were found to have a bearing on the level of milk consumption. Having both camper and counselor pour milk appeared to be the practice most conducive to increased milk consumption. Also, placing large containers of milk on the table was associated with higher levels of milk consumption than serving in half-pint cartons or having the children go through a cafeteria line to obtain their milk.

There was, on the part of most camp directors, a general awareness of the objectives of the Special Milk Program and concerted effort to encourage milk drinking among camp participants.

A high percentage--about 70 percent--of eligible nonprofit camps in the 3 States surveyed in July and August 1958 participated in the Special Milk Program.

Such factors as size of camp or sex of participants apparently were not associated with large differences in daily milk consumption rates in nonprofit camps in the States enumerated.

INTRODUCTION

The Special Milk Program was initiated in public and private schools in September 1954, pursuant to Public Law 690, 83rd Congress. This law amended a price-support provision of the Agricultural Act of 1949. Beginning with the 1957 fiscal year, the program was broadened to include summer camps, nursery schools, orphanages, and similar child-care institutions. The primary purpose of the program is to increase milk consumption among children through lowering its cost to them and thereby making it more readily available.

Nonprofit summer camps include those camps run by boys' and girls' clubs, civic bodies or church groups, and by organizations such as the Boy Scouts and Girl Scouts, 4-H clubs, Camp Fire Girls, etc. Also they include the fresh-air camps sponsored by charitable and civic organizations to give underprivileged children a vacation away from crowded cities. A camp is eligible to participate in the program if it is operated strictly on a nonprofit basis.

All of the camps surveyed provided milk to children as part of a complete service at some time during the day. These camps were reimbursed under terms of the Special Milk Program at the rate of 2 cents for every half-pint of milk served in this manner. About 3 percent of the sample camps also sold milk as a separate item and were thereby eligible for a 3-cent reimbursement on such milk. The maximum rate at which milk is subsidized in summer camps is at 3 cents a half-pint.

To the extent permissible under State law, administration of the Special Milk Program is a responsibility and function of the State Department of Education or other designated agency of the State. The Agricultural Marketing Service of the U. S. Department of Agriculture, however, administers the program directly in private schools, nonprofit summer camps, and other eligible private outlets in those States where State agencies have not been authorized to administer such a program. Most States do authorize a State agency to administer such programs, but this was not the case in Maine at the time of this study.

PROCEDURE

The Northeastern Region of the United States is known for its large number of private and nonprofit summer camps. The large number of camps is partly a result of the heavily urbanized area of this region. The States of Maine, Massachusetts, and New York rank high in the number of summer camps operated within their respective boundaries. Camping operations in the 3 States are considered rather typical of the Northeast region as a whole in terms of feeding services and membership.

In early July 1958, 262 nonprofit resident camps in Maine, Massachusetts, and New York were participating in the milk program. 1/ Twenty-six camps located at the extreme borders of Maine and New York were eliminated from consideration because they were in relatively isolated areas or otherwise would have been difficult to contact in the short summer season with the small number of enumerators employed in this study. From the remaining 236 camps, 109 were randomly selected for study in proportion to the number participating in the Special Milk Program in the 3 States. 2/ Although the universe of camps was confined to the 3 States, the results are believed to be generally applicable to the entire Northeast region.

In most of the 109 nonprofit camps studied, the campers were rotated about every 2 weeks, the change in campers usually taking place on weekends. About one-half the camps served between 75 and 149 participants at one time, one-fourth had less than 75 campers, and the other fourth served over 150

1/ Excludes day camps and child-care centers.
2/ For details of the sampling plan, see appendix.

children (table 1). About 10 percent of the camps were open only to children under 12 years of age. Another 10 percent of the camps catered to the 12-20 year age group exclusively, while the remainder were open to children of all ages. Of the sample camps, 40 percent were operated for boys only, 21 percent for girls only, and the remainder, 39 percent, for both boys and girls. In slightly over two-thirds of the camps, participants were charged a fee of less than $22.00 per week, while in the balance of camps, the fee charged was in excess of $22.00. Fees charged campers were often paid by civic groups or charitable organizations in whole or in part.

In the nonprofit camps studied, 42 percent were sponsored by national organizations such as Scouts, and YMCA's; 21 percent by local organizations; and 37 percent by religious bodies (table 1).

In each sample camp, the consumption of milk and other beverages were recorded for a 24-hour period, with milk used for cooking separated from that consumed as a beverage. 3/ The enumerator obtained total consumption of milk including that consumed at meals and at other times, by location, that is, in the dining hall, canteen, etc. In addition, the enumerator visited with campers at mealtime to observe milk-serving practices followed in each camp.

FINDINGS

Purchasing practices and cost of milk as related to consumption: The price paid for milk by camps was closely associated with the extent to which it was made available and, in turn, per capita consumption. An inverse relationship prevailed between prices paid for milk by camps and the number of daily servings. Camps serving milk daily 2 or fewer times paid almost 0.4 of a cent more per half-pint of milk (the usual serving unit) than camps providing 4 daily servings. Those camps buying milk in half-pint cartons paid an average of 6.8 cents per half-pint as compared with 4.8 cents per half-pint equivalent by those buying milk in 10-gallon containers (fig. 1). Camps purchasing all or a major part of their supply in half-pint cartons had an average daily per capita milk consumption rate of 3.1 half-pints compared with a rate of 3.7 half-pints in all other camps.

3/ Beverages other than fluid whole milk included:

Soft drinks
Chocolate drink
Cocoa made from whole and skim milk
Cocoa made from skim milk only
Cocoa made from whole milk only
Fruit or vegetable juices or both
Fruit ades
Iced tea

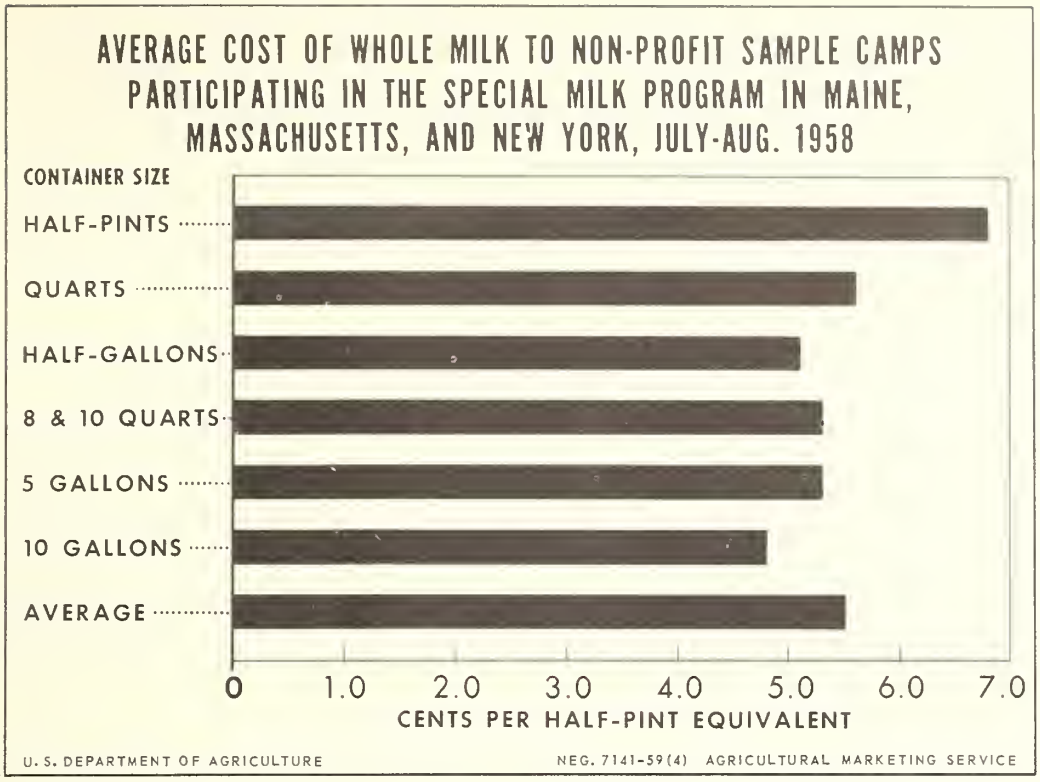

Figure 1.

Of the camps included in the sample, 83 percent paid under 6 cents a half-pint equivalent for milk, with per capita consumption averaging 3.6 half-pint equivalents, while the remaining 17 percent paid 6 cents or more and had an average per capita consumption of 3.3 half-pint equivalents (table 1). 4/

Consumption of milk in relation to size of camp: No statistically significant difference was found in the per capita consumption of milk by campers based on size of camp. 5/ However, while not significantly different, daily per capita consumption was 3.7 half-pint equivalents in camps serving under 75 participants, 3.8 half-pints in those serving 75 to 149 participants, and 3.4 half-pints in those serving 150 or more campers (table 1).

4/ For the most part, milk delivery service and cold storage space in the camp were more than adequate and did not restrict the quantity of milk that could be made available to campers.

5/ Results of an analysis of variance test indicated no significant difference in levels of per capita milk consumption by size of camp (table 2).

Consumption of milk in relation to age and sex of campers: In nonprofit summer camps, daily per capita consumption of milk was not substantially different by age or sex of campers. 6/ Campers under 12 years of age, however, showed on an actual basis a somewhat higher per capita rate than those in age groups 12 to 20 years (table 1). For all practicable purposes boys and girls had the same daily intake of milk. This finding is somewhat different from that reported for milk-drinking habits of boys and girls under everyday home and school environment. However, in summer camps the physical activities engaged in are basically the same for both sexes.

Consumption of milk in relation to number of other beverages available at time of milk service: It is logical to expect the daily intake of milk to be lower when other beverages are concurrently available for consumption. Findings indicate a progressive decrease of 0.2 half-pint in milk consumption with each additional beverage offered to campers at times of milk service. In camps where milk only was available at mealtime, daily per capita consumption averaged 3.8 half-pints compared with 3.6 half-pints in camps where milk and 1 other beverage were offered concurrently, and 3.4 half-pints in those where milk and 2 or more other beverages were concurrently available. Approximately one-half the camps offered concurrently milk and 1 other beverage to campers, one-third offered milk and 2 or more other beverages and about one-sixth, milk only (table 4).

Consumption of milk in relation to availability of other beverages at mealtime: In a few of the camps it was a practice to offer campers at some or all meals a choice of water or fruit ade, or both, and milk, while in other camps only milk was available at mealtime. In camps where water or fruit ade, or both, was made available at mealtime along with milk, per capita consumption of milk averaged 3.0 half-pint equivalents compared with 3.8 in camps where milk was the only beverage available (tables 4 and 5). 7/

Consumption of milk in relation to the availability of specific beverages: The kind as well as the availability of beverages affected milk consumption in nonprofit summer camps. Certain types of beverages served at mealtimes were associated with low milk-consumption rates. For example, fruit ade was sometimes substituted for milk primarily because of cost considerations. In such camps milk consumption was 0.8 half-pint below the rate in all other camps. The serving of cocoa made from water and skim milk also was associated with lower whole milk consumption (table 7).

6/ Results of an analysis of variance test indicated no significant difference in the per capita consumption of milk by sex of the camper (table 3). An analysis of variance test for determining whether there were significant differences in per capita consumption of milk by age of the camper was not undertaken as there was a small number of camps having only children under 12 years of age or only children 12-20 years of age. Most camps catered to multiple-age groups.

7/ Results of an analysis of variance test indicated a significant difference at the 10-percent confidence level in levels of per capita consumption of milk in (1) camps where water or fruit ade, or both, was made available at mealtime along with milk and (2) those camps where milk was the only beverage available (table 6).

The availability of soft drinks at times other than mealtimes appeared to have little, if any, effect on per capita milk consumption. The camps in which soft drinks were available had a milk consumption rate of only 0.1 half-pint less than in camps where soft drinks could not be obtained. Soft drinks were available in nearly two-thirds of the camps but never at mealtimes.

Fruit juices had an effect on milk consumption similar to that of soft drinks. About three-fifths of the camps served fruit juices to campers. Fruit juices were usually available at breakfast and generally in addition to milk, thus serving as a complementary beverage.

The serving of cocoa made from whole milk resulted in the disappearance of milk in another form and became plus consumption. The rather infrequent change in form may have served to stimulate appetites, and added to the rate of consumption in those camps following this practice.

Camps which had no fruit juice, fruit ade, soft drinks, cocoa-combinations, iced tea, etc., had an average daily per capita consumption rate of 4.4 half-pints of milk compared with all other camps with a rate of 3.5 half-pints. Of the 109 sample camps only 10 excluded all beverages but whole milk (table 7).

Camps in which only milk and fruit juice were served had an average daily per capita consumption rate of 4.2 half-pints of milk, just 0.2 half-pint less than in those camps serving only milk. Sixteen of the camps surveyed excluded all beverages but whole milk and fruit juices.

Levels of milk consumption in relation to the intake of other beverages: For purposes of analyses, the sample camps were divided into three equal-sized groups based on high, medium, and low rates of milk consumption (table 8). In the third of the camps where the rate of milk consumption was highest, per capita consumption of all beverages averaged 5.9 half-pint equivalents, with milk accounting for 83 percent of total beverage intake. In contrast, in the third of the camps where the rate of milk consumption was lowest, the per capita consumption of all beverages was only 4.3 half-pint equivalents, with milk accounting for slightly over half of total beverage consumption. Individuals in camps having the highest per capita milk intake, consumed milk at twice the rate of campers in the lowest third but other beverages at less than half the rate (fig. 2).

Consumption of milk in relation to number of times per day milk was served and to number of competing beverages available: It is logical to assume that milk consumption in nonprofit summer camps, or elsewhere, would be affected by the number of times the product was served and the number of nonmilk beverage items available for drinking. To what extent do these factors affect milk consumption? To answer this question, a mathematical measurement was made of the net effect of the two factors on fluid whole milk consumption rates in nonprofit summer camps. The two factors selected--number of times milk was served per day and number of competing beverage items available--were believed to have influenced most directly per capita milk

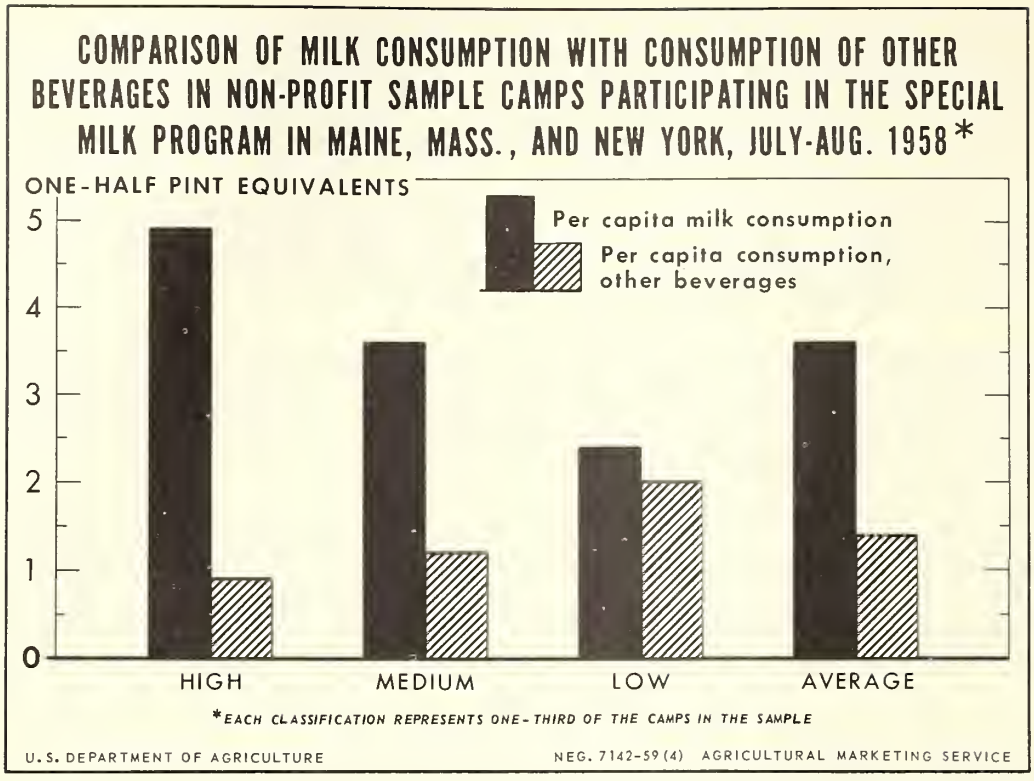
COMPARISON OF MILK CONSUMPTION WITH CONSUMPTION OF OTHER BEVERAGES IN NON-PROFIT SAMPLE CAMPS PARTICIPATING IN THE SPECIAL MILK PROGRAM IN MAINE, MASS., AND NEW YORK, JULY-AUG. 1958*
ONE-HALF PINT EQUIVALENTS
5
4
3
2
1
0
Per capita milk consumption
Per capita consumption, other beverages
HIGH
MEDIUM
LOW
AVERAGE
*EACH CLASSIFICATION REPRESENTS ONE-THIRD OF THE CAMPS IN THE SAMPLE
U.S. DEPARTMENT OF AGRICULTURE
NEG. 7142-59(4) AGRICULTURAL MARKETING SERVICE

Figure 2.

consumption in this outlet. This premise is predicated on the fact that consumption is directly related to availability which in turn is, in a large measure, governed by the cost of the product. With reference to the other factor, competing beverages, there is a physical limit to the quantity of any one beverage that can be consumed by an individual within a given period of time. In determining the relationship between milk consumption and the aforementioned factors, linear multiple correlation was used as a basic tool of measurement. From the analysis it was indicated that each additional serving of milk to campers up to 4 times a day resulted in an increase in per capita consumption by approximately 0.9 half-pint (the usual serving unit), assuming no change in the number of competing beverages offered campers (table 9). 8/ From the standpoint of raising the level of milk consumption in nonprofit summer camps, evidence indicated a fifth serving within a 24-hour period would not accomplish this objective (table 10).

8/ The net regression coefficient was statistically significant at the 1-percent confidence level. This means that in only 1 time in 100 would a coefficient of this size occur as a result of chance variation.

The analysis further indicated that each additional category of beverage offered campers--such as fruit juices, soft drinks, tea, etc.--resulted in a drop in per capita consumption by almost 0.2 half-pint, assuming the number of daily milk servings remained unchanged (table 9). 9/ From an optional standpoint, a camp manager can fairly well establish the level of milk consumption in relation to the number of competing beverages he wishes to make available.

Consumption of milk in relation to serving practices at mealtime: The data indicated that different serving practices at mealtime have a bearing on the level of milk consumption (table 11). In some camps children are served milk by counselors, in others they serve themselves, and in still others, both camper and counselor pour milk. The last situation prevailed as a practice in slightly less than three-fourths of the camps and appeared to be the one most conducive to increased milk consumption.

In a small number of camps, methods of serving milk such as placing half-pint cartons on tables or going through a cafeteria line were practiced. In camps employing these practices the per capita rate of milk consumption averaged 3.0 half-pints compared with 3.6 half-pint equivalents in camps which had bulk service. 10/

Awareness of objectives of Special Milk Program at camp level: Officials were interviewed in the camps contacted to ascertain their awareness of the Special Milk Program and to evaluate their attempts to encourage milk consumption among campers. About 90 percent of the officials showed general awareness of the program and its objectives and all but 3 percent were aware of the reimbursement benefits of the program.

Frequency of availability may be said to reflect camp policy to encourage milk consumption. In addition, in some camps posters were displayed in dining halls extolling the benefits of milk drinking.

A high percentage of eligible nonprofit camps in the 3 States surveyed--around 70 percent--participated in the Special Milk Program.

9/ The net regression coefficient was statistically significant at the 10-percent confidence level, not so firm an indication as that for frequency of milk service but probably indicative of the general magnitude and direction of change.

10/ Bulk service is defined to include the pouring of milk from pitchers, quart bottles, or other large containers on tables.

APPENDIX

Methodology

Beginning in July 1958, 262 nonprofit resident summer camps in the States of Maine, Massachusetts, and New York were participating in the Special Milk Program. For purposes of sampling, the universe of camps was reduced to 236; an elimination was made of 26 camps located in relatively isolated areas at the extreme borders of Maine and New York. A random probability sample of 109 camps was drawn, with this number considered of sufficient size to yield statistically reliable data.

The 109 camps were grouped into clusters of 2's, 3's, and 4's. This procedure was utilized to increase the efficiency of field operations by reducing travel time for field enumerators. Clusters of camps were randomly drawn in proportion to the number in each State so as to have a self-weighting sample.

A pretest was conducted in 2 camps prior to undertaking the full-scale study. The primary purpose of the pretest was to test the adequacy of a questionnaire and other forms required in obtaining the desired information. The pretest also provided an indication of camp directors' reaction to such a study.

In each sample camp, a trained interviewer asked the camp administrator certain questions having a direct bearing on milk service. The interviewer also observed the serving of milk at mealtime and at other times when the beverage was available to campers.

The utilization of milk and other beverages in each camp was recorded for a 24-hour period. The quantity of milk used for cooking purposes was recorded separately from that consumed as a beverage. The data were collected in camps during July and August 1958.

Two field offices were established, one in Concord, Mass., which served as headquarters for both Maine and Massachusetts; the other in Albany, New York. Upon completion of questionnaire and audit schedule for a camp, it was mailed to one of the respective field offices for review. The materials were examined for internal consistency, conformance with instruction, completeness, and other quality standards. Where necessary, telephone calls or additional personal visits to camps were made to correct deficiencies and improve the accuracy of the reporting on all questions.

Table 1.--Daily per capita milk consumption in nonprofit summer camps participating in the Special Milk Program in Maine, Massachusetts, and New York, selected characteristics and number of camps, July-August 1958

Item	Per capita milk consumption	Number and percentage distribution of camps	
	Half-pints or equivalent	Number	Percent
Average or total	3.6	109	100
Location of camp:			
Maine	3.6	10	9
Massachusetts	3.7	50	46
New York	3.5	49	45
Size of camp:			
Under 75 participants	3.7	27	25
75-149 participants	3.8	51	47
150 and more participants	3.4	31	28
Age of participants:			
Under 12	4.0	12	11
12-20	3.5	11	10
Multiple-age groups	3.6	86	79
Type of camp:			
Boys	3.7	44	40
Girls	3.8	23	21
Both boys and girls	3.4	42	39
Unit cost of milk to camp:			
Under 6 cents	3.6	90	83
6 cents and over	3.3	19	17
Fees charged per week:			
Less than $22.00	3.7	74	68
$22.00 and over	3.4	35	32
Sponsor of camp 1/:			
National organization	3.8	46	42
Local organization	3.6	23	21
Church	3.4	40	37

1/ National organization sponsorship includes groups such as the Boy and Girl Scouts of America, YMCA, and YWCA. Local organization sponsorship applies to groups such as community chests not having a national headquarters.

Table 2.--Analysis of variance table for determining significance of effect on per capita consumption of milk of size of camp in nonprofit sample camps participating in the Special Milk Program, July-August 1958 1/

Source of variation	Sum of squares	Degrees of freedom	Mean square	Variance ratio (F)
Total	160.56	108	---	---
Between sizes	4.84	2	2.42	2/1.646
Error	155.72	106	1.47	---

1/ Sample camps were located in the States of Maine, Massachusetts, and New York.
2/ Not significant at the 10-percent confidence level.

Table 3.--Analysis of variance table for determining significance of effect on per capita milk consumption of the sex of participants in nonprofit sample camps participating in the Special Milk Program, July-August 1958 1/

Source of variation	Sum of squares	Degrees of freedom	Mean square	Variance ratio (F)
Total	160.56	108	---	---
Between types	4.78	2	2.39	2/1.626
Error	155.78	106	1.47	---

1/ Sample camps were located in the States of Maine, Massachusetts, and New York.
2/ Not significant at the 10-percent confidence level.

Table 4.--Effect of varying numbers of competing beverages on milk consumption in nonprofit sample camps participating in the Special Milk Program when available at time of milk service, July-August 1958 1/

Availability of beverages at time of milk service	Per capita consumption of milk	Number of camps
	Half-pint equivalents	Number
Milk only	3.8	18
Milk and 1 other beverage	3.6	56
Milk and 2 or more other beverages	3.4	35
Average or total	3.6	109

1/ Sample camps were located in the States of Maine, Massachusetts, and New York.

Table 5.--Daily per capita milk consumption in nonprofit sample camps participating in the Special Milk Program as related to certain serving practices, July-August 1958 1/

Camps following specific practices	Daily per capita milk consumption	Number of camps
	Half-pint equivalents	Number
Fruit ade or water or both with milk at meals	3.0	15
Fruit ade in lieu of milk at meals	3.2	21
Average or total, fruit ade or water or both at meals 2/	3.2	36
No fruit ade or water at meals	3.9	73
Average or total, all camps	3.6	109

1/ Sample camps were located in the States of Maine, Massachusetts, and New York.
2/ One or more meals.

Table 6.--Analysis of variance table for determining significance of effect on per capita consumption of milk by providing concurrently water or fruit ade and milk at mealtime in nonprofit sample camps participating in the Special Milk Program, July-August 1958 1/

Source of variation	Sum of squares	Degrees of freedom	Mean square	Variance ratio (F)
Total	160.56	108	---	---
Between camp practices	5.31	1	5.31	2/3.660
Error	155.25	107	1.45	---

1/ Sample camps were located in the States of Maine, Massachusetts, and New York.
2/ Significant at the 10-percent confidence level.

Table 7.--Daily per capita milk consumption in nonprofit sample camps participating in the Special Milk Program having a specific beverage available compared with consumption in all other camps, July-August 1958 1/

Beverage	Milk consumption in camps with a specific beverage available 2/		Milk consumption in all other camps	
	Number of camps	Half-pints equivalent per capita	Number of camps	Half-pints equivalent per capita
Fruit ade	32	3.1	77	3.9
Cocoa-combination 3/	7	3.1	102	3.6
Cocoa-skim	27	3.2	82	3.8
Soft drinks	40	3.5	69	3.6
Iced tea	8	3.6	101	3.6
Fruit juice	66	3.6	43	3.6
Cocoa-whole	27	3.8	82	3.5
None	10	4.4	99	3.5

1/ Sample camps were located in the States of Maine, Massachusetts, and New York.
2/ Per capita consumption is shown for a number of camps making available a specific beverage without regard to the availability of other beverages.
3/ Made from whole and skim milk.

Table 8.--Comparison of daily milk and other beverage consumption in non-profit sample camps participating in the Special Milk Program and having high, medium, and low per capita milk consumption rates, July-August 1958 1/

Level of milk consumption 2/	Per capita consumption 3/			
	Milk	Other beverages 4/	Total	Milk as a percent of total
	Half-pint equivalents	Half-pint equivalents	Half-pint equivalents	Percent
High	4.9	0.9	5.9	83
Medium	3.6	1.2	4.8	75
Low	2.4	2.0	4.3	55
Average	3.6	1.4	4.9	73

1/ Sample camps were located in the States of Maine, Massachusetts, and New York.
2/ Each classification represents one-third of the camps in the sample.
3/ Weighted averages.
4/ Does not include cocoa made from whole milk which is reflected in milk consumption; excludes coffee.

Table 9.--Summary of regression analysis with per capita milk consumption in nonprofit sample camps participating in the Special Milk Program as the dependent variable (X_1) and the number of times per day that milk was available (X_2) and the number of competing beverages available (X_3) as the independent variables 1/

Item	Constant term	Independent variables		Other descriptive measurements
		X_2	X_3	
Net regression coefficients	0.0974	0.9304	-0.1664	---
Standard error of net regression coefficients	---	.1739	.1000	---
t ratios	---	2/5.349	3/1.664	---
Coefficients of partial correlation (r)	---	.5205	- .1863	---
Coefficient of multiple determinations (R^2)	---	---	---	0.3564
Coefficient of multiple correlation (R)	---	---	---	.5970

1/ Sample camps were located in the States of Maine, Massachusetts, and New York.
2/ Significant at the 1-percent confidence level.
3/ Significant at the 10-percent confidence level.

Table 10.--Per capita milk consumption in nonprofit sample camps participating in the Special Milk Program by availability and type of milk service, July-August 1958 1/

Availability	Per capita milk consumption: Service from bulk containers only	Other service 2/	Average, all service	Number of camps
	Half-pint equivalents	Half-pint equivalents	Half-pint equivalents	Number
At 1 or 2 meals	3/2.7	4/2.9	2.7	16
At 3 meals	4.0	4/3.5	3.9	41
Average meals only	3.6	3/3.4	3.6	57
At 3 meals and 1 additional time	4.1	4/3.6	4.0	23
At 3 meals and 2 additional times	4/4.6	4/3.9	4.0	11
At all other combinations	3/3.3	4/2.8	3.2	18
Average meals and additional times	3.8	3.4	3.6	52
Average or total, all times	3.7	3.4	3.6	109

1/ Sample camps were located in the States of Maine, Massachusetts, and New York.
2/ Includes consumer-size units and cafeteria-style service.
3/ These per capita consumption figures represent the weighted average for 11 or 12 camps.
4/ These data are representative of average per capita consumption in less than 11 camps.

Table 11.--Daily per capita consumption in nonprofit sample camps participating in the Special Milk Program as related to certain serving practices, July-August 1958 1/

Camps following specific practices	Daily per capita milk consumption	Number of camps
	Half-pint equivalents	Number
Milk service from bulk containers on table:		
Campers serve themselves	3.0	12
Counselors serve campers	3.5	16
Campers and counselors serve	3.8	71
Average and total	3.6	99
Other milk service 2/:		
Average and total	3.0	10

1/ Sample camps were located in the States of Maine, Massachusetts, and New York.
2/ Cafeteria style of service or consumer-size units placed on tables.

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